
DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

**Endangered and Threatened Wildlife
and Plants; Determination of
Threatened Status for *Liatris Helleri***

AGENCY: Fish and Wildlife Service,
Interior.

ACTION: Final rule.

SUMMARY: The Service determines *Liatris helleri* (Heller's blazing star), a perennial herb limited to seven populations in North Carolina, to be a threatened species under the authority of the Endangered Species Act (Act) of 1973, as amended. *Liatris helleri* is

threatened by recreational development of the high mountain peaks where it grows and by trampling and habitat disturbance due to heavy use by hikers and climbers. This action will implement Federal protection provided by the Act for *Liatris helleri*.

DATE: The effective date of this rule is December 21, 1987.

ADDRESS: The complete file for this rule is available for inspection, by appointment, during normal business hours at the Asheville Field Office, U.S. Fish and Wildlife Service, 100 Otis Street, Room 224, Asheville, North Carolina 28801.

FOR FURTHER INFORMATION CONTACT: Ms. Nora Murdock at the above address (704/259-0321; FTS 672-0321).

SUPPLEMENTARY INFORMATION:

Background

Liatris helleri, described by T.C. Porter in 1891 from material collected in North Carolina, is a perennial herb with one or more erect or arching stems arising from a tuft of narrow, pale green basal leaves. The stems reach up to 4 decimeters in height and are topped by a showy spike of lavender flowers 7 to 20 centimeters long. Flowering occurs from July through September with fruits present from September through October (Kral 1983, Radford *et al.* 1964). Although the taxonomy of the genus is complex, *Liatris helleri* can be distinguished from other similar high altitude species of *Liatris* by its much shorter pappus, ciliate petioles, internally pilose corolla tubes, and lower, stockier habit (Gaiser 1946, Cronquist 1980). Additional work is underway on plants at two of the sites, which may result in their being redescribed as a taxonomically separate entity (Sutter, in preparation). If this is done, an editorial change to the List of Endangered and Threatened Plants will be made to also include the new taxon.

Liatris helleri is a species endemic to a few scattered summits in the northern Blue Ridge Mountains of North Carolina. The species grows on high elevation ledges of rock outcrops in shallow, acid soils where it is exposed to full sunlight. Nine populations of *Liatris helleri* have been reported historically; seven remain in existence. Four of these populations are in Avery County with one population each remaining in Caldwell, Ashe, and Burke Counties, North Carolina. Five of the remaining populations are located on privately owned lands, and two are located on public land administered by the U.S. Forest Service and the National Park Service. Two additional populations were historically known for the species,

but one site (Watauga County) has since undergone residential development, and the other (Mitchell County) has been subjected to intensive recreational use. *Liatris helleri* has not been relocated at either locality during recent searches. The continued existence of *Liatris helleri* is threatened by trampling and habitat disturbance due to heavy use of its habitat by hikers and other recreational users as well as development for commercial recreation facilities and residential purposes (Massey *et al.* 1980).

Construction of new trails, other recreational improvements, significant increases in intensity of recreational use, or intensive development at any of the sites could further jeopardize this plant. Most of the populations occupy a very small total area, with fewer than 20 individual plants at 2 of the 7 sites. Three of the privately owned sites have been developed as commercial recreation facilities; development of a fourth site as a ski slope is currently underway. The fifth privately owned site belongs to The Nature Conservancy and is protected. The two sites in public ownership are located in scenic areas which attract large numbers of visitors annually.

Federal Government actions on this species began with section 12 of the Endangered Species Act of 1973, which directed the Secretary of the Smithsonian Institution to prepare a report on those plants considered to be endangered, threatened, or extinct. This report, designated as House Document No. 94-51, was presented to Congress on January 9, 1975. The Service published a notice in the July 1, 1975, *Federal Register* (40 FR 27823) of its acceptance of the report of the Smithsonian Institution as a petition within the context of section 4(c)(2) (now section 4(b)(3)) of the Act and of its intention thereby to review the status of the plant taxa named within. *Liatris helleri* was included in the July 1, 1975, Notice of Review. On December 15, 1980, the Service published a revised Notice of Review for Native Plants in the *Federal Register* (45 FR 82480); *Liatris helleri* was included in that notice as a category-1 species. Category-1 species are those species for which the Service currently has on file substantial information on biological vulnerability and threats to support proposing to list them as endangered or threatened species. On November 28, 1983, the Service published a supplement to the Notice of Review for Native Plants in the *Federal Register* (48 FR 53640); the plant notice was again revised September 27, 1985 (50 FR 39526). *Liatris helleri* was included as a category-2

species in the 1983 supplement and the 1985 revised notice. Category-2 species are those for which listing as endangered or threatened may be warranted but for which substantial data on biological vulnerability and threats are not currently known or on file to support proposed rules. Subsequent to that notice, the Service received a draft report on the status and taxonomy of *Liatris helleri* (Sutter, in preparation). This report and other available information indicate that the addition of *Liatris helleri* to the Federal List of Endangered and Threatened Plants is warranted.

Section 4(b)(3)(B) of the Endangered Species Act, as amended in 1982, requires the Secretary to make certain findings on pending petitions within 12 months of their receipt. Section 2(b)(1) of the 1982 amendments further requires that all petitions pending on October 13, 1982, be treated as having been newly submitted on that date. This was the case for *Liatris helleri* because of the acceptance of the 1975 Smithsonian report as a petition. In October 1983, 1984, 1985, and 1986, the Service found that the petitioned listing of *Liatris helleri* was warranted but precluded by other listing actions of a higher priority and that additional data on vulnerability and threats were still being gathered. The February 19, 1987, proposal of *Liatris helleri* to be threatened constituted the next 12-month finding for this species.

Summary of Comments and Recommendations

In the February 19, 1987, proposed rule (52 FR 5156) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. Newspaper notices inviting public comment were published in the *Morganton News-Herald* and the *Skyland Post-Times* on March 15, 1987, and March 11, 1987, respectively.

Nine comments were received. Of these, seven respondents expressed support for the proposal, including the North Carolina Department of Agriculture, the U.S. Forest Service, North Carolina Natural Heritage Program, the Tennessee Department of Conservation, and the Southern Appalachian Highlands Conservancy. Two additional comments were received which offered no new information and did not take a position on the proposal.

One of these latter respondents, a commercial nursery, mentioned that the species may have value for the horticultural trade. Respondents that supported the proposal also expressed strong support for the decision not to designate critical habitat, due to the probability of increasing the taking threat to the few remaining populations.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *Liatris helleri* should be classified as a threatened species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1). These factors and their application to *Liatris helleri* Porter (Heller's blazing star) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Seven populations of *Liatris helleri* are known to exist in Caldwell, Avery, Ashe, and Burke Counties, North Carolina. Two other historically known populations have apparently been extirpated due to residential development and heavy recreational use. Only three of the seven extant populations are afforded some protection from human-induced habitat alterations. The four other populations occur on lands which have been or are being developed for commercial recreation use. Of the three partially protected sites, only the one owned by The Nature Conservancy receives full protection from human disturbance. Those on lands administered by the U.S. Forest Service and the National Park Service are subject to heavy recreational use. The greatest damage to *Liatris helleri* in the past has probably come from the commercial development of the open mountain summits where it occurs. The construction of trails, parking lots, roads, buildings, observation platforms, suspension bridges, and other recreational, residential, and commercial facilities has taken its toll on the species either through the actual construction process or by trampling due to hikers and sightseers (Kral 1983). Currently, heavy trampling occurs at two of the locations where *Liatris helleri* is known to survive; however, the high intensity use and potential impact from increased use and development pose serious threats to

all of the the small habitats occupied by this species, particularly if additional development occurs (Massey *et al.* 1980). With anticipated increased usage by sightseers, rock climbers, and hikers at six of the remaining seven localities where *Liatris helleri* occurs, significant impact on this species in the form of increased soil erosion, soil compaction, and trampling could occur if protection is not provided. Likewise, additional development at any of the locales (such as expansion of trails or sidewalks, construction of additional visitor facilities, or residential development) could further threaten the species if proper planning does not occur.

B. *Overutilization for commercial, recreational, scientific, or educational purposes.* *Liatris helleri* is not currently a significant component of the commercial trade in native plants; however, other species of the genus are regularly sold in the commercial wildflower trade. As noted by one of the respondents to the proposal, *Liatris helleri*, with its compact habit and attractive lavender flowers, has potential for horticultural use, and publicity could generate an increased demand.

C. *Disease or predation.* Not applicable to this species at this time.

D. *The inadequacy of existing regulatory mechanisms.* *Liatris helleri* is afforded legal protection in North Carolina by North Carolina General Statute, Chapter 106, Article 19-B, 202.12-202.19, which prohibits intrastate trade and taking of plants without a State permit and written permission of the landowner. *Liatris helleri* is listed in North Carolina as threatened. State prohibitions against taking are difficult to enforce and do not cover adverse alterations of habitat or unintentional damage from recreational use. The Endangered Species Act will provide additional protection and encouragement of active management for *Liatris helleri*, particularly on Federal lands.

E. *Other natural or manmade factors affecting its continued existence.* As mentioned in the "Background" section of this rule, many of the remaining populations are small in numbers of individual stems and in terms of area covered by the plants. Therefore, little genetic variability exists in this species, making it more important to maintain as much habitat and as many of the remaining colonies as possible. *Liatris helleri* is an early pioneer species growing on rock ledges in full sun. Depending upon the elevation and suitability of the site for supporting woody vegetation, invasion by

ericaceous shrubs and trees may occur, which could eliminate *Liatris helleri* by overcrowding and shading. Since this type of succession is a slow process, this is not considered an immediate threat to survival of the species. However, proper management planning for *Liatris helleri* is needed to address this aspect of the species' biology. Natural rock slides, severe storms or droughts, or other natural events may also eliminate populations of this plant.

The Service has carefully assessed the best scientific and commercial information available regarding the past, present, and future threats faced by this species in determining to make this rule final. Based on this evaluation, the preferred action is to list *Liatris helleri* as threatened. With two of the nine known populations having been extirpated and six of the remaining seven subject to some form of threat, this species warrants protection under the Act. Threatened status seems appropriate because the complete extirpation of most remaining populations is not imminent. Because the areas occupied by the plant are usually small, it is easily possible for a concerned landowner or developer to preserve the habitat needed for the plant's survival. This has been done successfully in the cases of two of the commercial recreation areas where the plant occurs. Critical habitat is not being designated for the reasons discussed below.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time the species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for *Liatris helleri* at this time. With its showy flowers, and with other members of the genus already in commercial trade, the species has high potential for horticultural use. Increased publicity and the provision of specific location information associated with critical habitat designation could result in taking pressures on the species. Although taking and reduction to possession of threatened plants from lands under Federal jurisdiction is prohibited by the Endangered Species Act, taking provisions are difficult to enforce. Publication of critical habitat descriptions would make *Liatris helleri* more vulnerable and would increase enforcement problems for the U.S. Forest Service and the National Park Service. Also, the populations on private lands would be more vulnerable to

taking. Increased visits to population locations stimulated by critical habitat designation could therefore adversely affect the species. The Federal and State agencies and landowners involved in managing the habitat of this species have been informed of the plant's locations and of the importance of protection. Protection of the species' habitat will be addressed through the recovery process and through the Section 7 jeopardy standard. Therefore, the determination of critical habitat would not be prudent, and no additional benefit would result from it.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and the prohibitions against taking are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat, if any is being designated. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402. Section 7(a)(2) requires Federal agencies to insure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a Federal action may adversely affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service.

The U.S. Forest Service and the National Park Service have jurisdiction over portions of this species' habitat. Federal activities that could impact *Liatris helleri* and its habitat in the future include, but are not limited to, the

following: construction of recreational facilities (including trails, buildings, or maintenance of such facilities), use of aerially-applied retardants in fire-fighting efforts, road construction, permits for mineral exploration, and any other activities that do not include planning for this species' continued existence. The Service will work with the involved agencies to secure protection and proper management of *Liatris helleri* while accommodating agency activities to the extent possible.

The Act and its implementing regulations found at 50 CFR 17.71 and 17.72 set forth a series of general trade prohibitions and exceptions that apply to all threatened plants. All trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.71, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export any threatened plant, transport it in interstate or foreign commerce in the course of a commercial activity, sell or offer it for sale in interstate or foreign commerce, or remove it from areas under Federal jurisdiction and reduce it to possession. Seeds from cultivated specimens of threatened plant species are exempt from these prohibitions provided that a statement of "cultivated origin" appears on their containers. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving threatened species under certain circumstances. With respect to *Liatris helleri*, it is anticipated that few trade permits would ever be sought or issued since this species is not common in cultivation or in the wild. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, DC 20240 (703/235-1903).

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination

was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

References Cited

- Cronquist, A. 1980. Vascular flora of the southeastern U.S. Vol. 1 (Asteraceae). UNC Press, Chapel Hill. P. 204.
 Gaiser, L.O. 1946. The genus *Liatris*. *Rhodora* 48:572-576.
 Kral, R. 1983. A Report on some rare, threatened, or endangered forest-related vascular plants of the South. Tech. publ. R8-TP-2. USDA—Forest Service. Pp. 1191-1194.
 Massey, J., P. Whitson, and T. Atkinson. 1980. Endangered and threatened plant survey of 12 species in the eastern part of Region 4. Report submitted to U.S. Fish and Wildlife Service, Region 4, under contract 14-16-004-78-108.
 Porter, T.C. 1891. A new *Liatris* from North Carolina. *Rhodora* 18:147-148.
 Radford, A.E., H.E. Ahles, and C.R. Bell. 1964. Manual of the vascular flora of the Carolinas. UNC Press, Chapel Hill. Pp. 1048-1051.
 Sutter, R. In preparation. Taxonomic analysis of *Liatris helleri*, a North Carolina endemic.

Author

The primary author of this final rule is Ms. Nora Murdock, Asheville Field Office, U.S. Fish and Wildlife Service, 100 Otis Street, Room 224, Asheville, North Carolina 28801 (704/259-0321 or FTS 672-0321).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the CFR, is amended as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*); Pub. L. 99-625, 100 Stat. 3500 (1986), unless otherwise noted.

2. Amend § 17.12(h) by adding the following, in alphabetical order under the family Asteraceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

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(h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
ASTERACEAE—Aster family.						
<i>Liatris helleri</i>	Heller's blazing star	U.S.A. (NC)	T	300	NA	NA

Dated: October 22, 1987.

Susan Rocca,

Acting Assistant Secretary for Fish and
Wildlife and Parks.

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